



# ***Industry/Government Working Group for Performance Criteria***

## ***Overview:***

In support of government mandated acquisition reform The Natick Soldier Center established an industry and government working group to develop performance criteria and test methodology that predict wear life and comfort of clothing and individual equipment. The criteria and test methods developed will be used as discriminators among submissions for large scale military procurement. Representatives from industry, as well as a professional standards development organization, are guiding the effort so that the methods will be useful to industry as well as government.

The working group prepared program plans to characterize and quantify the comfort and durability of the Battledress Uniform (BDU). The BDU was selected as the first item because it is the highest volume clothing item in the military system.

In the first phase of the durability effort the Enhanced Hot Weather BDU will be subjected to approximately 120 wear days in a simulated combat training facility at the U.S. Marine Corps Infantry Officer Course, Quantico, VA. Since the ten week training schedule is standardized, the 60 uniforms issued are expected to receive similar wear patterns that will be quantifiable and reproducible. During the second phase, wear trends of the BDUs will be characterized and documented. Efforts will be made to quantify the rate of deterioration and reproduce the wear in the laboratory using new or existing methods.

The comfort study is a three phase effort. In the first phase, a biophysical analysis will be performed on a variety of BDU fabrics to determine the heat and moisture vapor transfer properties, and objective and subjective tactile properties. Ongoing contractual efforts include the procurement of materials and training services to establish a sensory tactile panel. In the second phase, manikin testing and predictive modeling will be performed. In the last phase, human subject testing will be conducted at the Natick Soldier Center's Doriot Climatic Chambers under a variety of environmental conditions. Throughout the human subject study both physiological and psychological data will be collected and analyzed to determine which fabric and garment characteristics predict user comfort.

We look forward to continued industry participation over the next two years and offer an open invitation to those who are interested in joining the effort.

## ***Point of Contact:***

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